



Card Front (Image)

### Type I Error ( $\alpha$ ) - "False Positive"

#### Definition:

Occurs when you REJECT the Null Hypothesis ( $H_0$ ) when  $H_0$  is actually TRUE.  
You conclude an effect/difference exists, but it doesn't.

#### Probability:

- Denoted by  $\alpha$  (alpha).
- This is the significance level set by the researcher (e.g., 5.0%).
- The shaded red area in the plot under  $H_0$ .

#### Example:

A medical test incorrectly indicates a healthy person has a disease.

Card Back (Text)